The Veterinary Record.

(Founded by William Hunting, F.R.C.V.S., 1888.)

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Research Stations.*

By H. P. G. Maule, D.S.O., M.C., F.R.I.B.A.

(Note.—We are indebted to Major H. P. G. Maule, of Messrs. Forsyth and Maule, Architects, 12 Stratford Place, W.1., and to the Editor of the *Journal of the Royal Institute of British Architects* for their kind permission to reprint the following article on "Research Stations.").

One of the most important of our post-war problems, not only from a national, but even from an international point of view, is, I think, the problem of Modern Research and all that it implies. Like all new developments, its importance is slow of finding general acceptance or even recognition. We have only to consider the early stages of hospital or school planning to realise how much there is to explore and experiment with before any kind of reliable data on research buildings can be laid down. By the very nature of the problems involved new and vital conditions must continually present themselves for solution, and I venture to think architects have great opportunities before them of furthering and advancing this great cause which concerns the amelioration of human and animal suffering, the development of agriculture, trade and industry, and both directly and indirectly the advancement of knowledge for the welfare and benefit of mankind.

Modern research, though not entirely a post-war problem, received, as we all know, an enormous impetus as the result of the Great War. Since then not only have Governments, notably our own, taken up the problem as one of national urgency, but large private firms and commercial undertakings have begun to realise that the old rule of thumb method of elimination by error is no longer in accord with modern requirements.

I am not alone in thus urging the importance of this problem. It has been said that the British contributions to research in tropical diseases are in themselves a sufficient justification for the British Empire. Mr. Bruce, Prime Minister of Australia, in his great speech at the recent Imperial Conference, said :

"I think if I were asked to-day to name the most important thing for the promotion of Empire trade, for ensuring efficiency in production, and competitive power in the markets of the world, I would put first the application of science both to our primary and secondary industries. While a great deal has already been done, I venture to suggest it is essential to get some greater co-ordination of all the efforts that are being made to-day to bring to the aid of industry the assistance of science. The Committee which is being appointed from this Conference to consider that question, I would urge strongly, should have in mind an endeavour to try to bring about some system of co-operation in regard to scientific research in its application to industry on an Empire wide basis."†

This quotation serves to emphasise the two great branches of research work—pathology, both human and animal, and the promotion of efficiency in trade and agriculture; and I venture to suggest that what Mr. Bruce said with regard to co-ordination applies with almost equal force to those of us who may be called upon to design the buildings in which this great work must have its inception.

It needs no prophet to predict that the next twenty-five years will see an enormous development in research of all kinds. Buildings will be required for research institutes and applied research in all commercial undertakings. Some of these no doubt will be little more than small physical or chemical laboratories, but others will demand all the skill and ingenuity which architects can give.

I would suggest that our governing body, the Royal Institute of British Architects, might perform a very useful work by definitely collecting plans and information concerning buildings for research, not only in this country, but all over the world. It may be said that architects would prefer selfishly to keep their plans and information to themselves rather than give the benefit of their experience to their fellow draftsmen, but I think this is a mistaken and shortsighted view. Anything which makes for greater efficiency in the planning of research buildings—and such information, easily available, would do so—must react to the benefit of architects as a class. Moreover, it is our duty to do all in our power to assist the advancement of scientific knowledge for the benefit of mankind as a whole. Just as research workers publish their conclusions and such information as may assist progress in their particular branch, so architects should afford their colleagues the opportunity of avoiding definite error and of improving upon hard-won experience. There is now a very considerable number of research buildings in this country. The merits and demerits of these must be pretty well known to the technical staffs. So far as these buildings are under, or partly under, Government Departmental control, it should not be difficult to obtain sufficient and useful information both with regard to general planning and matters of detail. This information would be of the greatest assistance to any architect called upon to design a research building, and in my opinion should be collected and collated by the Institute for the benefit of members.

One small point is worth mentioning. Ordinarily, if we are employed by a private client or a business firm or a governing body, our client or the technical advisers of the firm or the staff under the governing body are generally able to give us very definite information as to what is required. In the case of schools or hospitals, there is now a definite standard of what is best and right and much expert knowledge, which is readily accessible. In the case of research buildings, the very newness of

* A Paper read before the Birmingham Architectural Association on 7th January, 1927.

† *Times*, Monday, 25th October, 1927.

LONDON: ROYAL VETERINARY COLLEGE, NEW RESEARCH BUILDING, 1925.
Elevation to Great College Street.

Note: No laboratory windows appear on this elevation.

FIELD LABORATORIES OF THE INSTITUTE OF ANIMAL PATHOLOGY, CAMBRIDGE, 1926.
Ground Plan.

the movement generally precludes great experience of their building requirements on the part of the technical staff, and there is, so far as I know, no standard work of reference to which access can be had. Hence, as in all new design problems, we generally have to start upon a basis of something different but familiar, and some research buildings have even been planned with the general appearance of a Queen Anne house. It ought now to be possible to avoid a technical error of this sort.

It may now be expedient to discuss briefly the nature and purpose of some of the buildings with which I have been concerned, in order to endeavour to deduce some generalisations.

These buildings may be divided broadly into three groups :

(1) Pathological, by which I mean buildings primarily concerned with the study of human and animal diseases ; (2) agricultural, which, of course, may include everything connected with agriculture, from animal pathology to the design of agricultural implements and agricultural processes ; (3) trade and commercial.

Two points emerge from the study of conditions governing any research buildings, and these are how very few *data* there are to start upon, and how divergent are the views of those most intimately concerned, particularly upon matters of technical detail.

At the risk of appearing obvious perhaps I may be permitted to point out that most research institutions, whether on a large or a small scale, are primarily required for a team of workers, and hence in planning we must consider the building as a whole dominated by this idea of team work. There may be individual lines of research, but broadly speaking the work is co-operative and is co-ordinated by a director whose duties must be many and various. The convenience and comfort of the director and his staff, not only in their laboratory workshops, but in the placing of their rooms with regard to one another and the departments used in common, are all important for smooth and efficient working. I would lay great stress upon the recognition of the value of harmonious team work. It is, I think, going to be even more important in the future as scientific knowledge becomes more minute and specialised and the time of specialists more valuable. Perhaps we hardly know enough yet about the psychological aspect of team work, but most of us do know that working day after day at high pressure and at close quarters with the same companions is apt to produce frayed and irritated nerves, and such physical conditions do not produce the best results. I know one very able director who insists that his two hard tennis courts are the best means of guarding against this evil. I think every research building should have at least one pleasant common room and a library in which it is possible to read in comfort.

The laboratories themselves, whatever their particular function—chemistry, biology, physics, etc.—should be treated as workshops for their particular purpose and not camouflaged as domestic dwelling rooms, which they are not. Hence light, ventilation, warmth, intense attention to cleanliness, extreme simplicity of detail are essential. The great difficulty from an architectural point of view is undoubtedly that of fenestration. Nearly all work in a well-lighted laboratory takes place at the bench under the windows, and from the nature of the work free and unrestricted light is generally required throughout the length of the bench and throughout the room generally. Dark spaces occasioned by large piers are generally so much waste space and almost inevitably result in greater floor area than is essential. I am inclined to think that research workers themselves are, generally speaking, inclined to attach too much importance to large laboratory areas. I have seen two men working in a room which would easily hold six. I am inclined to think that the ideal laboratory should be designed as a series of two-man units with movable partitions, such as steel roller shutters, which could be opened up into one large room if and when required. In any event, it is wise to remember the value of small one- or two-man laboratories, which may be required for some special and urgent work or for a research visitor from overseas who may be attached to the station for some particular enquiry. Some particular line of attack may take months, or even years, of patient unremitting work, which must not be interrupted, and, again, some new and insistent problem may require instant elucidation or at least instant attack. In such cases a small spare laboratory is of the utmost value, and may sometimes be planned and fitted into the general scheme without material increase of cost if considered as an integral part of the scheme from its first inception.

To revert to the question of fenestration, it is clear that if large and wide window areas have to be provided, architects may get into difficulties with their elevations, but since research buildings are for research workers, and since the nature of that work demands an unusually large light area, it is our duty to try and find the appropriate architectural setting. It is none the less a difficult problem, which I for one feel I have not yet satisfactorily solved. Doubtless time and experience will find a solution.

The question of aspect for the laboratories is important. Nearly always the demand is for a north or east aspect where possible, and it is therefore advisable so to plan the building that offices and less important rooms face south. I am inclined to think that there may be modifications in this practice and that our rapidly increasing knowledge with regard to the action of the sun's rays may lead to workrooms of whatever kind being given the benefit of sunlight, and that science and the ingenuity of architects will in time find some means to overcome the disadvantages without detriment to the work or workers. One of the great attractions to me in the design of research buildings is that we architects are ourselves research workers in this particular building problem. All sorts of new possibilities have been opened up by the discovery and application of Vita glass, due to the enterprise of a Birmingham firm, and I should be very loath to say that it is essential for research laboratories to have a north aspect, though that is the present practice.

One of the difficulties I, personally, have had to contend with has been the eternal financial question, the problem of cramming a quart measure into a pint pot.

FIELD LABORATORIES OF THE INSTITUTE OF ANIMAL PATHOLOGY, CAMBRIDGE, 1926.

FIELD LABORATORIES OF THE INSTITUTE OF ANIMAL PATHOLOGY, CAMBRIDGE, 1926: INFECTIOUS BOXES.
Showing ventilated corridor and isolation approaches to boxes.

This is almost inevitable at the present time, particularly with buildings largely or partly financed from Government sources. It has expressed itself in various ways; sometimes in the curtailment of the general scheme, sometimes in the quality and nature of the finishings, and nearly always in the external architectural expression, because it is felt that it is more important to spend what money is available on absolute essentials to promote efficiency than to cut these down and attempt a more pleasing exterior.

Research is in its infancy, methods change and progress is rapid, and the needs of to-day may give place to something quite different in the near future. It has been my experience in two buildings to have to make changes and additions before the work was even completed on account of new developments and increased staff. It may therefore be argued that buildings of a temporary nature should be employed as laboratories, but I think the answer to this is that most buildings of a temporary nature are utterly unsuited to pathological or biological work. They are extremely difficult to keep clean, are costly in upkeep and a great deal of the work must in any case be of a permanent nature. Floors, for instance, must be as dustless and quiet as possible. The essential thing therefore to be kept in view is to plan your building with the utmost possible adaptability, having regard to all circumstances. All subsidiary services, such as water, gas, electric light and power, sink, drainage, etc., should be run as far as possible on the surface and be accessible and easy of alteration. Regard should be had in general planning and construction to the possibility of easy extension, either vertical or lateral. As already hinted, possibly some standard unit of size of laboratories is feasible, larger areas being obtained by the juxtaposition of two or more units. The question of height for the bigger area at once calls for consideration, but height is largely controlled by width and adequate ventilation. I am convinced that it is a great mistake to make research rooms too wide, unless required for some special purpose; probably 16 feet is amply sufficient, and if so, then the height need not be excessive, say 10 feet to 12 feet.

I would suggest the great need and value of ample storage space. Research workers are both laborious and acquisitive. The results of their labours accumulate in many ways, and research literature grows annually in volume. In addition, new apparatus is frequently acquired and it is not always economic to scrap what is not wanted at the moment. Hence it is advisable to provide a good deal more storage space than is usually demanded in the first instance by the technical staff.

A small workshop where apparatus can be made and adapted is essential; space should be provided for this, with reasonable facilities of light and access, etc.

Lastly, I would urge the vital importance of the closest co-operation between the architect and the technical staff, the members of which will inhabit and use his building. I do not suggest that this is not the normal procedure in any large building operation, but my experience is that it is particularly necessary in the case of research buildings, because at present our own experience is bound to be somewhat limited, and in all probability the research worker's experience of research buildings is limited also. He often hardly knows what he wants, except in general terms, and for this very reason is perhaps apt to spring new conditions upon the architect after the drawings are completed and the contract signed, sometimes with embarrassing results when the accounts are being settled.

A few words may said upon matters of detail, more perhaps with a view to promoting discussion than to dogmatise.

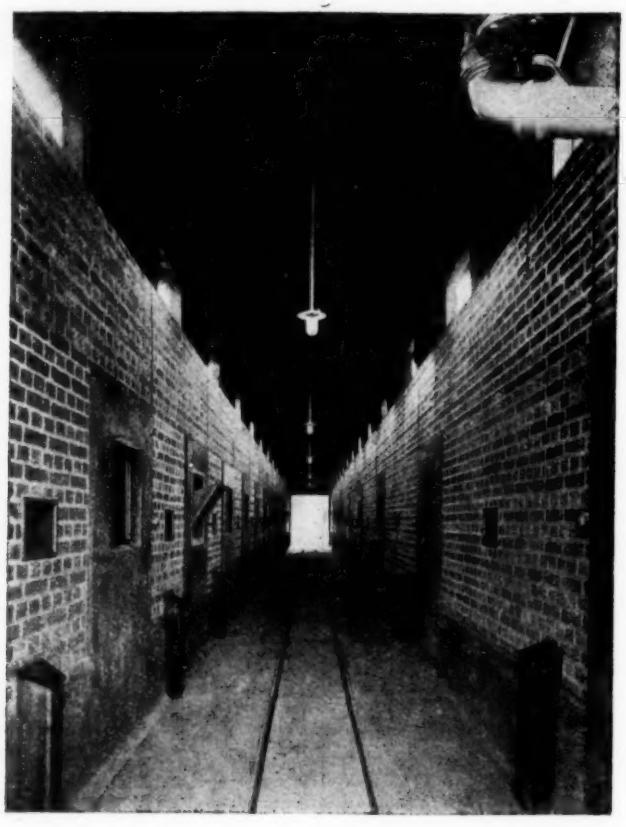
For laboratories, of whatever nature, I am inclined to think the best finish is Portland cement rendering, Keene's cement and paint. This finish lends itself to easy cleaning and with reasonable care is economic in upkeep. It may be said that it induces condensation, but from the scientist's point of view, condensation is preferable to dust and wet dust to dry dust. If funds will not allow of this, sand lime bricks are a fair substitute, but I am inclined to prefer a fair-face brick finish and distemper, which, though not ideal, is economic and not very costly in upkeep.

Floors are a vexed question. Some form of jointless floor is desirable, if it is kept well and Ronuked or waxed at reasonable intervals. It has the disadvantage of being somewhat slippery, but it is easily kept clean and has a pleasant appearance and is reasonably acid-proof and can have rounded angles turned up and finished flush with the plaster. If wood block is used it is undoubtedly pleasanter to live with, but it is more difficult to keep clean and is inclined to be dusty unless treated with a special preparation. For Media kitchens I believe a granite concrete is the best floor.

Doors and woodwork generally should, I think, be treated as nearly as possible as in good hospital work, with an absolute minimum of mouldings or dust traps of any kind.

For all laboratories I prefer metal casements with reasonable access for opening and cleaning, but it must be remembered that for many kinds of work open windows near the bench are apt to let in dust. Possibly for bacterial work the ventilation should be specially arranged with a view to minimise dust. In certain work a sterile cabinet is essential, with a specially contrived humid atmosphere. In all laboratory work, cleanliness is of great importance.

After trying several methods of bench drainage, I am inclined to favour direct sink drainage into half or three-quarter round channels, arranged above the floors and under the benches. I prefer this to any form of closed pipes, even where adequately provided with inspection eyes and easy bends. The disposal of sink waste water is a difficult problem. There is always danger of frost affecting a trickle of water from some continuous experiment necessitating a running tap. At the Rothamsted Research Station at Harpenden, great difficulty has been experienced from time to time from this cause. In some cases a 6 inch by 4 inch glazed stoneware waste is taken down inside the building, discharging through the wall at ground level. A good deal can be said for this method, though at first sight it appears to be in opposition to accepted principles of sanitation.



FIELD LABORATORIES OF THE INSTITUTE OF ANIMAL PATHOLOGY, CAMBRIDGE, 1926: INFECTIOUS BOXES.

Feeding and inspection corridor, showing inspection window, feeding hopper and externally controlled water point.

FIELD LABORATORIES OF THE INSTITUTE OF ANIMAL PATHOLOGY, CAMBRIDGE, 1926.
Interior of a Laboratory, showing simplicity of treatment.

It was adopted at the Mill Hill Research Laboratory built for the Medical Research Council for the use of Dr. Gye and Mr. Barnard in their cancer researches.

The question of fittings is perhaps the most difficult of all. For benches, opinion differs as to heights, widths, method of carrying, etc.; but one thing is essential, benches must be of sufficient thickness and must be rigid. In some educational laboratories benches are, I understand, sometimes made independently, so that re-arrangement to suit varying needs is possible. I have no experience of this method, but I scarcely think it is advisable for most kinds of research work. Movable benches might be a subsidiary fitting, but for all wall benches under windows absolute rigidity is, I think, essential. Teak, is, I think, undoubtedly the best material, though satisfactory benches can be made of Canary whitewood, but the thickness used should not be less than 2 inches. Where practicable, I prefer cantilever brackets to standards, so that there is no restriction whatever in the placing of seats.

In connection with benches, some mention should be made of radiators. If these are placed in front of windows under benches an opening should be provided in the bench top over the radiator, fitted with a wire guard, to allow free circulation of the warmed air. I am inclined to think the ideal form of warming laboratories would be by the comparatively new method of surface radiation. I have no personal experience of this method, but radiators are at the best dust traps, and the rising hot air acts as a dust conveyor, which, theoretically at any rate, cannot be considered a good system.

The provision of ample cupboard space is, I think, essential, and though it is not always demanded, I think it should be provided. The ideal way is to form the cupboards as part of the wall construction, with sliding doors and no mouldings, projections or tops. This method was adopted at the Cambridge field laboratories, but I would suggest that if such cupboards are used adequate ventilation at floor and ceiling levels should be provided.

In conclusion, I would again reiterate that the purpose of this paper is not so much to discuss detail as to draw attention to this new development of modern civilisation, and to suggest that here is scope for the architectural profession and the Institute in particular to assist in the advancement of knowledge for the welfare and benefit of mankind.

R.C.V.S. Library.

The following books and pamphlets have been added to the Library during the past week:—

"Researches Concerning Avian Tuberculosis in Cattle; occurrence of Avian as well as Bovine, Tubercle Bacilli in the same Cow," Plum; "Statistical and General Report, Army Veterinary Service, 1925-6";

Annual Reports for 1926.—Madras, Bihar and Orissa, A.V.S. in India, Ontario Veterinary College, Tanganyika, Northern Provinces, Education Department, High Commissioner for India, Ludwig-Maximilians Universitat, Munchen.

Transvaal University College Calendar, 1927; Royal College of Physicians Calendar, 1927; University of Madras Calendar, 1927.

Books and pamphlets may be borrowed from the Library by Members of the College on payment of postage both ways. Apply to the Librarian, 10 Red Lion Square, London, W.C.1.

The Veterinary Record

16th July, 1927.

RESEARCH FACILITIES.

Where research of any particular kind, be it industrial or pathological, is concerned, and where the outcome of which means so much to the progress and welfare of a nation, obviously the research worker must be provided with the proper facilities in the pursuit of the highly-specialised work expected of him. The provision of suitable buildings is all important in this respect; indeed, for the veterinary scientist in his investigations into those animal diseases which cause such serious devastations in our flocks and herds and consequent loss monetarily to both the State and the individual, adequate and suitably constructed laboratories and premises are imperative.

It is with much pleasure, therefore, that we place before our readers this week a very instructive article by Major H. P. Maule, a member of the distinguished firm of architects, Messrs. Forsyth and Maule, with whom the veterinary profession may now claim very happy associations, as among the firm's various activities on behalf of the profession is included the handsome rehabilitation of the Council Chamber and premises of the Royal College of Veterinary Surgeons, so carefully and thoughtfully carried out by Mr. Salwey. The article, which is republished from the *Journal of the Royal Institute of British Architects* by kind permission of Major Maule and the Editor of the *Journal*, is all the more interesting inasmuch as it is the first opportunity the majority of our profession has had of seeing photographs of our newly-erected Research Institutes at London and Cambridge.

We are grateful to Major Maule for his contribution to the advancement of veterinary science from the architect's point of view. In the progress of research it becomes more and more apparent that team work is the guiding factor, that the best results are not obtained from ploughing one's own furrow, as it were, that multiplicity of ideas is helpful, and that true progress is really made when all scientific professions lend their aid and ally themselves for the common good. As Major Maule rightly remarks, architects have great opportunities of furthering the great cause which has as its aim the amelioration of human and animal suffering, and it is to be hoped that in their special sphere they will continue to guide us to our best advantage.

To comment on the detail of laboratory construction, such as fenestration, aspect, jointless floors, cemented walls, bench drainage, cupboard space in walls and the many other items conducive to cleanliness and ease in working, is not the purpose of this editorial article, but we should like to emphasise the following essential points so clearly brought out by Major Maule, and which, we suggest, have not always been observed in buildings erected to house research workers :—

(1) Research laboratories are specialists' workrooms and, as such, must primarily be conceived in the interests of the highly-skilled workers therein.

(2) Adaptability to suit changing and varying needs.

(3) Temporary buildings are often more costly in the long run and invariably are found disagreeable to work in.

Hence, some mean is required between very elaborate and costly architecture and the flimsy temporary structure. We may take it for granted, however, that the practical and efficient research worker is a good judge of necessity, and that by co-operation with the equally efficient architect his requirements would receive the consideration they deserve.

NOTANDA.

Burrows (*Archives of Internal Medicine*, April, 1926) seems to have proved that metastases in cancer are not due to cell migration from the initial centre, but to the spread of a liquid substance liberated by the cancer which stimulates cell growth of normal cells as well as that of cancer cells.

. . . . . .

The pathology of the œdema associated with purpura hæmorrhagica is not understood. Authors disagree as to the derangement that enables the blood to flow out of the regular vascular channels.

. . . . . .

Spinal anæsthesia by means of injections of anæsthetic solutions into the spinal canal at the coccyx, such as was recently demonstrated on a cow, is one of the common practices of urologists.

. . . . . .

Dislocation of the neck, according to Cocksedge (*Vety. Jnl.*, Aug., 1926) seems to be a common accident in camels. He described four cases he met with in Somaliland during six months.

. . . . . .

Intradermal injection of the fluid of a hydatid cyst is recommended by Gernez as a means of diagnosing echinococcosis. The fluid can be taken from cysts of sheep or cattle, or from man. The reaction is rapid, appearing in from ten to fifteen minutes and developing into a large patch within the day. (*Echo Medical du Nord.* June, 1926).

. . . . . .

Hæmorrhage, no matter what may be the cause, ceases under the action of a concentrated solution of sodium citrate, according to Renaud (*Bulletin Academie de Medicine*, May, 1926). He recommends the following solution :—citrate of sodium, 30 ; chlorate of magnesium, 10 ; distilled water, 100. The dose for humans is 15 to 30 c.c.

H. K.

CLINICAL AND CASE REPORTS.

An abnormal Foal's head.

By HUGH C. WATSON, M.R.C.V.S., Blairgowrie.

One Sunday afternoon recently I delivered from a mare the foal, the head of which is seen in the photographs.

The obstruction was a foreleg back. The foal, which in other respects was a healthy Clydesdale colt, lived for some minutes after delivery. The birth was up to time, and the mother had had previous healthy foals.

The eyes are very large and bulging ; the nostrils are much distorted, and the front of the top jaw is about four or five inches behind that of the lower one. (The white towel rather spoils the profile view).

I record this as I have never seen or heard of such a case in a foal, though I have seen a somewhat similar head in a calf.

A Case of extensive Dropsy in a Cow.

By ARTHUR NEW, M.R.C.V.S., Ashton-under-Lyne.

On February 18th, 1927, I received a letter from a farmer saying that he had a cow due to calve in May, that had lately gone off her feed, had difficulty in getting up and was a great size. I found her a medium-sized Shorthorn cow, with an enormously-enlarged abdomen which was as tight as a drum and caused her to breathe with difficulty. She was in low condition.

I decided to tap the abdomen immediately, which I did with an ordinary Nosen trocar and canula, through the left inner flank, when a clear watery fluid continued to flow into buckets for a period of over two hours. During that time the measured quantity was eighty-two quarts.

The cow had a living calf in her.

I left some tonics and asked the owner to let me know how she went on at calving. I wrote to him after the time she should have calved and he replied that he had had her shot a month after I tapped her, as she had almost filled again. I have recorded the above case as I have never taken so much fluid from a cow before.

Brain Penetration, with recovery, in a Gelding.

By Rai Sahib Debakar Dey, P.V.S.,
Assistant-Principal, Bengal Veterinary College, Calcutta.

The subject was a chestnut country-bred gelding, about sixteen years old.

It had been harnessed in one of the hack carriages of Messrs. Cook and Co., Calcutta, and when plying in a Calcutta street collided with a motor taxi-cab. The horse was found lying in a precarious condition by an Inspector of the C.S.P.C.A., and subsequently brought to the Bengal Veterinary College hospital.

The horse was practically bathed in blood, with contused lacerated and punctured wounds all over his body. The animal, which was suffering severely from shock, was standing with difficulty. He was well rugged down and then suspended in slings, and 1,500 units of tetanus anti-toxin were given subcutaneously. Two ounces of Sabajahenpur rum, with an ounce of sal volatile, with one pint of mucilage, were given as drench, and atropine sulph., gr. $\frac{1}{20}$, subcutaneously to combat shock. All the superficial wounds were washed with absolute alcohol and then were dressed with tr. iodi, and dusted over with boric acid powder.

The horse had a contused wound on the middle third of the inferior cervical region, measuring about 8in. long, lacerating the skin, sub cutis, panniculus cervicalis, sterno-thyroideus, and sterno-thyrohyoideus muscles.

Bleeding was controlled by compressing the smaller blood vessels and ligaturing the larger. Afterwards the jagged edges of the muscles were trimmed off, the edges being brought together by aseptic silk worm gut, leaving a portion unstitched for proper drainage, and the wound dressed under thorough antiseptic precautions.

A piece of iron fixture of the motor car, measuring about 1¼ins. was found stuck into the brain after piercing the skin covering the union of the parietal bones and fracturing the bone. Only the upper ¼in. of this was projecting, and with some difficulty and care this had been extracted with a pair of strong bullet forceps. Pieces of fractured bone were very carefully removed, as far as possible without injury to the membranes. The skin wound was closed by stitches to prevent insinuation of dirt and flies, which latter are very abundant at this time of the year in Calcutta. The neck wounds healed up rapidly and the skull wound healed up by first intention. The horse was discharged within three weeks of admission.

The case has its importance in that such cases of brain injury have rarely been remedied by surgical interference without any septic complications.

ABSTRACTS.

[**Correction of Malpresentation of the Foetus by Scientifically Producing Nerve Reflexes.** Dr. A. Sjoberg, in *Tierärztliche Rundschau*, 1927. No. 10-14].

Pressure on an eye, can, by the increase of this stimulus, produce reflex movements which cause alterations in the presentation and attitude of the fœtus. Technically the following process takes place. The hand takes hold of the forehead of the fœtus and exerts for some minutes with thumb and middle finger a firm, even pressure till the eye-ball relaxes somewhat. The finger-pads are laid on the highest point of the arch of the eye-ball. When the hand is removed one waits for five to ten minutes. There appear then movements in the right flank of the mother-animal, and the visibility of the more or less strong movements depends on the size of the angle of rotation. The examination which follows reveals a normal presentation of the fœtus. The cervical muscles, which had previously been in a state of high tone, are now soft and the head easily movable. The deficiency of oxygen in the blood, also the general hyperthermy, increase the reflex irritability of the fœtus, which cannot be produced at all—or at any rate not so intensely—in the animal after birth. By this convenient resource, strength and time are spared, and greater results produced.

(Ex *Prager Archiv. für Tiermedizin und vergleich. Pathologie*, May 15th, 1927). E. H.

[**Disinfection of the Horse's Mouth**. Dr. Roger. *Revue Vét.*, Toulouse, 1926].

To disinfect the mouth in infectious diseases of the horse, Dr. Roger proceed in an original manner by drawing out the tongue and spreading on it and all accessible parts of the oral cavity molasses mixed with methylene blue, then giving an injection of pilocarpin. Under the influence of the pilocarpin, masticatory movements and movements of the tongue are started, also salivation and attempts at licking. In addition, a vessel containing methylene blue dissolved in water is set before the patient.

(Ex *Prager Archiv. für Tiermedizin und vergleich. Pathologie*. May 15th, 1927). E. H.

Register of Dairy Cattle.

The Register of Dairy Cattle, published by the Ministry of Agriculture (Adastral House, Kingsway, London, W.C.2., price 1s. post free), gains steadily in importance and value. The primary object in preparing this volume is to facilitate the selection of cows, heifers, etc., of proved milking capacity. The efforts of the Ministry have been well supported, as may be gathered from the fact that 7,500 animals are recorded in the new volume, the tenth of the series. Shorthorns head the list, as might be expected, with a total of 4,805, the Friesians being second with 1,316, and all the milking breeds are represented. The breeds are graded in quantity of milk yielded, and the Friesians lead here, with 20 giving 2,000 gallons or over in the year, with the Shorthorns second with four. The volume contains much information of a kind helpful to farmers in selecting deep milking stock.—*The Times.*

National Veterinary Medical Association of Great Britain and Ireland.

Quarterly Meeting of Council.

A meeting of the Council of the N.V.M.A. was held at 10 Red Lion Square, W.C., on Wednesday, June 28th, when there were present: The President (Professor G. H. Wooldridge) Captain T. J. Bosworth, Mr. W. H. Brooke, Mr. J. H. Carter, Major R. Catmur, Mr. H. J. Dawes (Hon. Secretary), Major J. Facer, Mr. A. Gofton, Mr. H. P. Hogben, Major H. Kirk, Mr. G. H. Locke, Mr. G. P. Male, Mr. C. Masson, Mr. J. W. McIntosh, Captain W. S. Petrie, Mr. J. O. Powley, Mr. W. J. Rees, Mr. H. L. Roberts, Lieut.-Col. P. J. Simpson, Mr. E. Alfred West (Hon. Treasurer), Dr. A. W. Whitehouse, Mr. J. Willett, Colonel W. A. Wood and Mr. F. Knight (Secretary).

In the temporary absence of the President, who was detained at a meeting of the Curriculum Sub-Committee of the Examination Committee of the R.C.V.S., Mr. J. W. McIntosh (Vice-President) was voted to the Chair.

The minutes of the previous Quarterly Meeting of Council which had been published in the *Record*, were taken as read and were confirmed.

Arising out of them, a resolution from the Western Counties Division, "That the Western Counties Division are of opinion that the time has arrived for the sale of tuberculin to be controlled by the Government," the consideration of which was deferred from the earlier meeting, was mentioned by the Secretary, who said that the Parliamentary Committee had the matter under consideration and that representations were about to be made to various bodies concerning it.

The matter was again deferred.

Correspondence.

(1) The receipt of communications of apology for absence was announced from Captain J. Anderson, Dr. Bradley (it was the day of the Royal (Dick) Prize Distribution), Captain D. Campbell, Mr. J. Clarkson, Mr. J. C. Coleman, Major Brennan De Vine, Mr. F. L. Gooch, Captain O. V. Gunning, Major F. T. G. Hobday, Mr. H. V. Hughes, Mr. Richard Hughes, Major T. M. Inglis, Mr. J. Ewing Johnston, Mr. J. S. Lloyd, Captain J. MacAllan, Captain J. F. Macdonald, Mr. J. McKinna (who, said the Secretary, recently underwent a serious operation, and is now making good progress towards recovery), Mr. R. B. Nelder, Major H. Peele, Captain A. W. Noel-Pillers, and Captain J. R. Rider.

It was agreed to send to Mr. McKinna a letter of sympathy with him in his illness, and expressing the Council's hope for his speedy recovery.

(2) From the Secretary of the Royal Veterinary College as follows:—

Royal Veterinary College,
Camden Town, N.W.1.
April 26th, 1927.

Royal Veterinary College Rebuilding Fund.

Dear Sir,—Your letter of the 7th instant was considered at a meeting of the General Purposes Committee of the Governors held here yesterday, and I was instructed to convey to the Council of the N.V.M.A. the grateful thanks of the Governors for their willingness to assist them in their efforts to raise the sum required for rebuilding and equipping the College, and for so kindly granting them the use of the *Veterinary Record*, in order to bring the Appeal before the members of the veterinary profession.

With regard to the last paragraph of your letter, I am to say that the Governors welcome the suggestion that two additional representatives should be elected to the Special Building Fund and Appeal Committee which has been formed, and I shall be glad if you will let me know officially the names of the gentlemen nominated by your Council.—Yours faithfully, T. C. Wight, *Secretary*.

F. Knight, Esq.,
General Secretary,
National Veterinary Medical Association
of Great Britain and Ireland,
10 Gray's Inn Square, W.C.1.

The Secretary: In accordance with the request made in that letter, I forwarded to Mr. Wight the names of Professor G. H. Wooldridge and Mr. H. J. Dawes as the Association's nominees for service on the Special Building Fund and Appeal Committee.

(3) From the Medical Secretary of the British Medical Association, as follows:—

British Medical Association,
British Medical Association House,
Tavistock House,
London, W.C.1.
April 9th, 1927.

Dear Sir,—I beg to thank you for your letter of the 7th inst., and note that your Association thinks it not advisable to promote a veterinary petition in opposition to the Dogs Protection Bill. Your Council is, of course, the best judge in regard to a matter of this kind, but one or two people who are keenly interested in this matter thought that a well-signed petition from the veterinary profession would have a great deal of interest with the alleged "dog lover," and I thought it my duty to pass the suggestion on.—Yours faithfully, Alfred Cox., Medical Secretary.

The General Secretary,
National Veterinary Medical Association of
Great Britain and Ireland,
10 Gray's Inn Square, W.C.1.,

(4) From the Librarian of the Royal College of Veterinary Surgeons, conveying the thanks of the R.C.V.S. Council for the gift of copies of the *Veterinary Record* during the quarter ending 31st March, 1927.

(5) From Major F. T. G. Hobday, in the following terms:

June 13th, 1927.

"I shall be glad if you will kindly bring before the Association at the next Council meeting, the following suggestion in my name, if I am prevented from being present: That the medallion attached to the chain of office of our President shall be made detachable so that it may be suspended round his neck by a ribbon (which I think should be of maroon colour), instead of his having, as at present, to wear the very nice but conspicuous gold chain which is necessary for all high, important functions. I say this from having observed that this is the custom with the Presidential Chains of Office of many societies.

"I should also like to suggest that the names on the links should be engraved deeper than they are at present."

It was agreed that the suggestions made in Major Hobday's communication be remitted to the Finance Committee for consideration and report.

(6) From the Hon. Secretaries of the Derbyshire, Midland, Mid.-West and South Wales, Lancashire and Royal Counties Divisions, in reply to the Council's request to be informed as to the views of the Divisions on the matter, expressing the opinion that the time has not arrived for the control of cows reacting to the tuberculin test.

As a complete return had not been received from the Divisions, the matter was allowed to remain in abeyance.

(7) From the Secretary of the Association of Veterinary Inspectors, Ministry of Agriculture, as follows:—

Association of Veterinary Inspectors,
7 Whitehall Place, S.W.1.
June 28th, 1927.

Dear Sir,—I have been asked by my Association to bring to your notice the fact that under the Trades Union Bill at present before Parliament civil servants are debarred from attaching themselves to any union or Association whose membership is not confined to persons employed within the service, the objects of which are for the purpose of influencing the remuneration and conditions of employment of its members, etc.

I should be glad if you would cause inquiry as to any action taken by the British Medical Association relative to members of that Association employed by the British Government.—Yours truly, WM. S. PETRIE, *Secretary*.

The Secretary,
National Veterinary Medical Association,
10 Gray's Inn Square, W.C.1.

The Council resolved itself into Committee to consider this communication, and upon the resumption of open meeting, it was announced that it had been referred to the Parliamentary Committee and the Solicitor for consideration and report.

The PRESIDENT, now entering and assuming the Chair, said: There is a rather sad duty to perform at this stage, and that is to report the deaths, since we last met in Council, of two of our ex-Presidents, namely, Mr. R. C. Trigger and Professor John Penberthy. There is little that one can say that can meet the case in regard to either and the very excellent work they have done for the profession and for this Association in their earlier days. Letters of sympathy have been sent to the relatives on your behalf and I propose we pass a vote of condolence in the usual way.

The vote was passed by the members standing in silence.

The SECRETARY reported the receipt of a letter of resignation from a member who had retired from practice, but who had not paid his subscription for the current year.

The Secretary was instructed to write intimating that acceptance of the resignation was deferred pending the receipt of the overdue subscription.

NEW MEMBERS.

The SECRETARY read the following list of names of gentlemen who, having filled in nomination forms and paid their subscriptions, applied for membership of the Association: Messrs. F. Beckett (Blandford), A. R. C. Bowie (St. Andrews), A. M. Crichton (Lisburn), W. B. C. Danks (Edinburgh), H. L. Hobson (Ministry of Agriculture), R. S. Howe (Buxton), R. Isherwood (Warrington), M. Malik (Patna), J. G. C. Mitchell (Alford), M. A. Molloy (Nzega), J. M. Morris (Dublin), C. J. Pugh (Chepstow) T. J. Reynolds (Cirencester), E. L. Siddall (Opotiki), R. H. Smythe (Camborne), and W. Western (Bracknell).

The elections were made *en bloc* amidst applause.

REPORTS OF COMMITTEES.

FINANCE COMMITTEE.

Mr. J. W. McIntosh (Chairman), read and moved the reception and adoption of the following report of this Committee:—

The Finance Committee has met twice during the past quarter.

Authority was given to the Treasurer to pay the liabilities shown in his financial statements.

The sum of £250 has been transferred to the Deposit Account, bringing the total now standing on deposit to £1,000.

It was decided to adopt the same procedure as last year in regard to members in arrear with their subscription for the present year, *viz.*, that the despatch of the *Record* to them should be stopped with the issue of June 25th, one month's notice being given.

The Committee have considered the matter of subscribing to the Royal Veterinary College Rebuilding Fund, and they recommend to the Council that a donation of 100 guineas be made to this Fund.

The HON. TREASURER then submitted his Financial Statement for the Quarter, which was approved.

The PRESIDENT: That, I think you will agree, is a very satisfactory financial statement. I would like to know if there is any discussion on the report before putting its adoption?

None being forthcoming, the PRESIDENT added: I should draw your attention to the concluding paragraph of the report: if you adopt the report, of course that receives the effect of a grant.

Mr. J. WILLETT: I think we are all agreed that this hundred guineas should be given, but I should like to know from the solicitor if we are empowered to do it.

The SOLICITOR read the clause in the Articles of Association giving power to the Association to vote moneys for such an object.

Mr. WILLETT: I was under the impression that we were allowed to make this donation, but I asked the question for the benefit of the meeting.

The motion for the adoption of the report was carried unanimously.

EDITORIAL COMMITTEE.

Sir JOHN MOORE (Chairman), read the following report of this Committee and moved its reception and adoption:—

The Editorial Committee has met on ten occasions since the last Quarterly Meeting of Council.

It has been decided to insert in the *Record* from time to time a notice to Secretaries of Divisions that all papers of which reprints are required and which are subsequently to appear in the *Record*, must be sent through the Office.

Owing to the increased interest which is being taken in the *Record* by students, as evidenced by the submission of material by them for publication, the Committee have agreed to the insertion of such material under a special heading, namely "Students' Contributions."

During the period under review the Committee have been glad to allow the use of the *Record* for the work of circularising members of the Association concerning the claims of the Royal Veterinary College Rebuilding Fund upon their support.

It is gratifying to report that the volume of material sent for publication in the *Record* is such as to ensure the issue of a paper of varied interest. The Committee would impress upon members the necessity of forwarding clinical material if the present standard is to be maintained. Early in the quarter the amount of material was such as to necessitate the employment of a very small type in order to keep the *Record* within the limit of thirty-two pages set by the Council. Since that date arrangements have been made with the printers for the adoption, as the standard, of a spaced type which is much more easily read and yet which allows of the employment of considerably more material than the large type previously employed. This change involves no additional cost.

In accordance with the decision of the Council at its last meeting, the staff is proceeding with the compilation of the Congress Handbook under the supervision of the Editorial Committee and good progress is being made.

Special efforts are being made by the Editorial Committee, in conjunction with the Finance and General Purposes Committee, to obtain as members those members of the profession who have not yet joined the Association.

Major H. KIRK seconded the motion for the adoption of the report.

The PRESIDENT: The work of the Editorial Committee is very heavy, as you will realise from the number of meetings it has had to hold in connection with it, and I may say that there has been a very excellent attendance at all of them.

The report was adopted without discussion.

VETERINARY INSPECTORS AND PUBLIC HEALTH COMMITTEE.

Mr. G. P. MALE (Chairman), read the following report of this Committee and moved its acceptance and adoption:

A meeting of the Veterinary Inspectors' and Public Health Committee was held here this afternoon, when further consideration was given to the Resolution from the West of Scotland Division concerning the restriction on private practice which is imposed on part-time Inspectors under this Act, in the light of the "opinion" of the Association's Solicitor as to the interpretation to be placed upon Sub-section 4 of Section 3 thereof.

It was resolved (*a*) That representations be made to the Scottish Board of Health, and that a small Sub-Committee be appointed to deal with the matter.

(*b*) That the Sub-Committee consist of the President, the Chairman of the Committee, Mr. Gofton, Professor Whitehouse and the Hon. Secretary (Mr. Dawes).

Mr. W. D. REES seconded the motion.

Mr. A. GOFTON: I should like to ask what the representations are that you propose to make to the Scottish Board of Health: I think we are entitled to be told that?

Mr. G. P. MALE: I think that was for the Sub-Committee to discuss; to consider the best form of letter to write to the Board. Mr. Gofton was elected on the Sub-Committee, and it was unfortunate that he was unable to be here.

The PRESIDENT: I may say, for the information of the Council, that the appointment of the part-time inspectors has been made under the Milk and Dairies (Scotland) Act, and there is a clause in that which provides that part-time inspectors shall not engage in private practice in the district where they are appointed to act, but there is also a provision by which an inspector can be appointed under the Public Health (Scotland) Act, where no such embargo holds. I may say that it is in the province of the Scottish Board of Health to sanction the appointment of inspectors without the embargo, and in a number of instances that has been done. It is with a view to attempting to get some further amelioration of the defect that the Sub-Committee is to be appointed.

Mr. GOFTON: I should like to propose that the Council go into Committee. I have a statement I would like to make, but I am not at liberty to make it for publication.

This was agreed.

Upon the resumption of Council, the PRESIDENT said: I will put the report as read by the Chairman of the Committee and that includes the appointment of a small Sub-Committee to approach the Scottish Board of Health on this matter on lines which shall appeal to that Sub-Committee and which have been emphasised this afternoon.

The report was adopted.

APPOINTMENTS COMMITTEE.

Mr. A. GOFTON (Chairman) read the following report of this Committee, moving its reception and adoption:—

At a meeting of the Appointments Committee held here this afternoon a letter was read from the Colonial Office agreeing to give longer notice, whenever possible, of vacancies above the junior grade occurring in the Colonial Veterinary Services, so that men in one Colony who desire to apply for posts in another Colony might have more time in which to send in their applications. In addition, an offer was made of an interview with the Private Secretary (Appointments) to discuss this, or any similar matter affecting the recruitment of veterinary officers with representatives of the Association.

The Committee considered the reply to be satisfactory, but decided to postpone taking advantage of the offer of an interview pending the result of the investigations into the conditions of service of Colonial appointments generally, now being made by the R.C.V.S.

A communication was submitted from the High Commissioner for India intimating his willingness to give longer notice, when practicable, of vacancies occurring in the Indian Veterinary Service.

The receipt was reported of a letter and statement from a member (which had also been sent to the R.C.V.S.) in which he compares conditions of service in Kenya Colony with those in the Federated Malay States. Their consideration was deferred.

Correspondence was submitted from a member asking for help in securing an increase in the salary paid to him as part-time veterinary inspector to an Urban District Council. After discussion, it was agreed to advise him to make representations to his Local Authority for a reconsideration of his salary, further action to be dependent upon the result of the application.

The Committee had before them further correspondence from Mr. P. G. Short notifying his provisional acceptance of the newly-created post of Principal Veterinary Officer, Malaya, at a salary of 1,000 dollars p.m., together with a copy of a communication which had been addressed by the Secretary of the R.C.V.S., to the Colonial Office in this regard and also concerning the salaries paid to veterinary officers in the Service.

The Committee instructed the Secretary to communicate with the Secretary of the R.C.V.S. with a view to taking such action as might be desirable to stimulate the Colonial Office to reply to that communication. The drafting of any letter which might be sent to the Colonial Office in this connection was left in the hands of the Sub-Committee appointed at the previous meeting, consisting of the President, the Chairman and Sir John Moore.

The report was adopted.

ORGANISING COMMITTEE.

In the absence of Dr. Bradley (Chairman), the report of this Committee was read by the Secretary, as follows:—

At a meeting of the Organising Committee, held this afternoon at 10 Red Lion Square, letters approving the principle underlying the Scheme for Propaganda recently launched by the Association, as explained in a confidential communication sent to Branches and Divisions on March 16th, 1927, were received from the following Divisions:—Central, Derbyshire, Dumfries and Galloway, North of England, Southern Counties, Veterinary Medical Association of Ireland, and Western Counties' Division.

The Secretary submitted a report of propaganda items circulated to the Press by our representative, which was considered to be satisfactory.

A letter was read from Mr. R. E. C. Dowling, of Ararat, Victoria, Australia, suggesting that certificates of merit should be awarded in conjunction with the prizes given in connection with the Clinical Prize Scheme for Students. After discussion, it was decided that it would be inadvisable to adopt the suggestion.

It was agreed to amend the Regulations governing the Scheme, in order to permit of the inclusion for award of

notes of cases seen during term time when the candidate is not actually attending classes or the Clinical Department of the College.

Major Kirk drew attention to an article in the *Sunday Pictorial* concerning the establishment in Berlin of a panel for animal patients, and suggested that the Organising Committee should consider the feasibility of the adoption of some such scheme for this country.

It was agreed to place the matter on the agenda for the next meeting.

The report was received and adopted, on the proposition of the President.

PROVISIONAL COMMITTEE.

Mr. C. MASSON (Chairman), read the following report of this Committee and moved its reception and adoption :—

A meeting of the Executive Committee was held at 61 Abbey Road, Torquay, on Wednesday, April 27th, 1927, when the social programme received a good deal of attention and amendment to that already proposed. A letter was received from Lady Wills inviting the members and their ladies to a Garden Party at Harcombe, Chudleigh. It was unanimously resolved to accept the invitation with many thanks.

The following were appointed to form the Ladies Committee : Mesdames Wooldridge, Buxton, Dunkin, Jackson, Herbert King, Masson and Norman. It was suggested that they should meet at the Torbay Hotel in the afternoon of Monday, September 12th.

A number of suggestions was received as to suitable subjects for demonstration, and the matter was referred to the Sub-Committee appointed to deal with the Trades Exhibition.

The arrangements of golf during the week of Congress and a proposed competition was left in the hands of Major W. N. Wright.

The closing meeting was fixed for Friday, September 16th at 9 a.m., and the time of the demonstrations on Thursday, September 15th, from 2 p.m. to 3-30 p.m.

Mr. W. D. REES seconded the motion.

The PRESIDENT: I think that is a very satisfactory report from the Provisional Committee and I am sure that things are moving satisfactorily towards a successful Congress. (Applause.) In addition, I may say that the papers are all to hand and will be in the printer's possession and circulated shortly.

With regard to the social functions during the week of the Congress, Mrs. Wooldridge has pointed out that sometimes ladies who come to the Congress are more or less strangers and feel a little out in the cold, and she has decided to be "at home" to a reception on Monday evening, after dinner at the Torbay Hotel, when the men are engaged, I believe, in finding out one another at the hotels. When the men are busy with their work on the succeeding morning the ladies can strike their acquaintances and the Ladies' Committee will arrange for their general entertainment.

Concerning the golf, it has been published in the *Record* that provision has been made for members of the Association to become honorary members of the Torquay Golf Club, and a local committee will be arranging a competition for one of the days. There will be arrangements for tennis, dependent, of course, upon the number of people who desire to play.

One other thing that is in course of arrangement is that Freemasons are to meet their Masonic brethren at the invitation of the St. John's Lodge, No. 328, Torquay.

I would like to voice my own wish that everyone who possibly can will come and bring his ladies and help to make the Congress a bumper success. (Hear, hear.) It will not be the fault of the Provisional Committee and of the members of other Committees of the Association if it is not a huge success from both the scientific and the social points of view. (Applause.)

Replying to an enquiry from a member, the President said that it had not been found possible to arrange for the provision of cheap railway tickets as the Association were, from past experience, unable to give the requisite undertaking to the Railway Clearing House as to the numbers who would avail themselves of the concession.

The report was adopted with enthusiasm.

RESOLUTIONS FROM DIVISIONS.

From the Lancashire Division.

"This Division fully supports the sentiments expressed by the President of the Royal College of Veterinary Surgeons, on the question of the Dogs' (Protection) Bill, at the meeting of the British Medical Association, as reported in *The Veterinary Record*, of April 9th, 1927."

The PRESIDENT: This resolution supports the opposition to the Bill; whether this Association will associate itself with the sentiments or not, it is for you to decide now. The Lancashire Division has done so, and has sent its resolution up to us for our consideration and support. Is it your wish that this resolution be adopted and a sympathetic communication sent to the British Medical Association supporting it ?

The Council expressed its unanimous assent to this course.

From the South Eastern Division.

"That, in the opinion of this Division, in view of recent and in preparation for any future legislation, it is very necessary for veterinary inspectors throughout the country to be closely organised. In furtherance of this object it is suggested that a general recommendation be sent by the "National" to all Divisions to form Veterinary Inspector Sections for the purposes of consultation, discussion and the giving of advice in all matters pertaining to their province."

The PRESIDENT: That is a recommendation from the South Eastern Division, and I may say it is already in operation in Lancashire—I think with very successful results.

Mr. H. P. HOGBEN: The Veterinary Section is an old-standing matter with the South Eastern Division which, however, is comparatively a young Division, and we have always found it very useful. If any matter arises concerning our veterinary inspectors they can call a meeting and discuss it amongst themselves. Particularly was it of use to us when the Dairies Order came into operation. I think the institution of such sections in connection with all Divisions of the "National" would be a good thing, not only for the reason I have already given but also because if the Veterinary Inspectors' Section of a Division makes any suggestion to the "National," that body would know exactly from whom the suggestion emanated.

The PRESIDENT: I think that perhaps this should be delayed a little in view of the decision taken in regard to the matter raised in the letter from the Secretary of the Association of Veterinary Inspectors of the Ministry of Agriculture, because a thing which will have to be determined is as to how far the part-time inspector may be

regarded as a civil servant and how far will he be involved in the Trades Disputes Bill.

Mr. H. L. ROBERTS: With regard to the resolution on the agenda, I was going to suggest that it might be better if it were considered in the light of Sections of the Branches and not of the Divisions, as we could get a better state of organisation by having Sections composed of members in the North and South Branches instead of having small Sections of Divisions.

The PRESIDENT: May I point out that in this resolution there is nothing to prevent the Inspectors Sections of different Divisions getting together, and that I think would meet the point as to the strength of organisation raised by Mr. Roberts.

Mr. HOGBEN: I think it is really necessary to have Divisional Sections as a beginning, because if, for example, you are dealing with a County Council, your inspectors in the Division concerned would want to meet as a Divisional Section and not to be subjected to the cumbersome and lengthy procedure which would be involved in calling Branch Sections. The formation of the latter might, however, be useful as an additional measure, but I also feel that you want your Divisional Sections first.

Mr. MALE: I should like to support Mr. Hogben. I think many Divisions have their Veterinary Inspector Sections and they have proved themselves very useful, and I think we might well recommend their establishment by others. Many questions may arise: there may be an endeavour made in England to restrict the practice of veterinary inspectors in the same way as is done in Scotland, in which case we should need all the support we could possibly get.

It was unanimously agreed to adopt the resolution.

ANY OTHER BUSINESS.

Mr. H. L. ROBERTS: I have one little matter to lay before you. Mr. Charles Percivall, M.A., Headmaster of St. Mary's Grammar School, Basingstoke, presented me, at the same time as he presented the Royal College of Veterinary Surgeons, with a portrait of his grandfather, Mr. William Percivall. The last surviving son of William Percivall, Mr. Percivall Percivall, resided for a number of years at Ipswich, where he died last year. He was an old client and a friend of mine for upwards of sixteen years. I used to go and smoke a pipe with him and listen to his yarns about his military career in India. I was instrumental in putting Mr. William Percivall's descendants in touch with Sir Frederick Smith, and at the same time as they presented his photograph to the College they presented one to me. I had it framed and I am wondering whether the Association would accept this to hang in the offices at Grays Inn Square, for I am sure that Mr. Charles Percivall and his sister would agree that I was doing quite the correct thing in offering this gift to the Association.

The PRESIDENT: I think I can, without any hesitation, on behalf of the Association accept your kind offer and thank you for it. (Applause.) It can hang in the Committee Room at the offices and I am sure it will be an ornament and an inspiration to those who see there the fine old face of Percivall of immortal fame.

A hearty vote of thanks to the President for his conduct in the chair terminated the proceedings.

DIVISIONAL REPORTS.

Derbyshire Division.

TECHNIQUE OF THE DIAGNOSIS OF DISEASES UNDER THE DISEASES OF ANIMALS ACTS.

(*Continued from page 607.*)

DISCUSSION.

The discussion on Mr. Tweed's demonstration was opened by Mr. STEELE BODGER, who congratulated Mr. Tweed on his practical paper and the demonstration which he had given them. In abortion he was interested in what had been said about the agglutination test and he would like Mr. Tweed to tell them more about the test, as some authorities regarded the agglutination test of little value, for the reason that one got agglutination of abortion bacilli with normal cow's blood. He knew that a certain dilution of suspected blood was required to cause agglutination before the disease was suspected and would like Mr. Tweed to tell them what this dilution was. In vaccination against abortion he thought the use of live vaccine a bad procedure in a dairy herd and he preferred the dead vaccine, which was followed by fewer bad results, such as abscesses and abortions, compared with the result of the live vaccine.

He would like to know why Mr. Tweed preferred the intradermal tuberculin test for the T.B. Order, as he considered it a good test under any circumstances.

Mr. LEVIE, Derby, described the demonstration as a very interesting one, which would be of much benefit to the members of that Division. There were one or two points which he would like to discuss with Mr. Tweed. He had had an experience of many years in the examination of milk samples and had considered it preferable to try and get rid of the milk constituents in milk examinations for tubercle, leaving the tubercle bacilli alone on the slide. He had tried treating the milk with 4½ per cent. acetic acid to dissolve the cells, etc., and to leave the tubercle bacilli. He also considered that with a high speed centrifuge a few minutes' spinning was sufficient and would like to know the exact time milk should be centrifuged. He also thought it was unnecessary to spend more than ten minutes searching for tubercle bacilli in any film, and preferred to make another examination of the milk. Did Mr. Tweed consider the fore milk or strippings the best for examination?

Mr. DEVILLE, Uttoxeter, said that he had used the Ministry of Agriculture's live vaccine for abortion with good results and he had had very few abscesses resulting from its use. In anthrax, he understood Mr. Tweed recommended a fairly thick smear being made. Personally, he did not like too thick a smear made for examination.

He was particularly struck with what Mr. Tweed had said on the diagnosis of tuberculosis of the udder. Those of them who were only occasionally engaged in diagnosing this condition felt that they had a lot to learn about a tuberculous udder.

Mr. Tweed had advocated the carrying out by themselves of the microscopic examinations of milk samples, but he

found that it was a tedious procedure if one was engaged in the course of one's practice duties, and he was not in agreement with the short time required to do them which had been mentioned by Mr. Levie. He also thought that county councils should allow a fee for microscopic examination if such was made, not as it was at present, where no fee was allowed them in some places and the milk samples were all sent to the county laboratory.

Mr. BAGSHAW, Uttoxeter, asked if Mr. Tweed had any experience with the abortoscope in abortion and how soon after abortion took place should a microscopic examination be made to be of any practical value ?

Mr. HOWE emphasised the importance and the value of microscopic technique to the part-time inspector. He cited the instance of two cows which were giving tubercle bacilli in their milk and which had been found microscopically at a county laboratory, yet the authority would not give a definite opinion that they were tubercle bacilli until the guinea-pig had been tested. In the interest of public health that delay should not be and the cows should be killed as quickly as possible.

Mr. TWEED, in replying, said : In regard to Mr. Steele Bodger's point in the agglutination test, if a dilution of 1 in 50 or higher of the suspected animal's blood caused agglutination of the bacilli in an emulsion of abortion bacilli it was usually reckoned that the cow had got contagious abortion. In the use of live abortion vaccine it had been his (Mr. Tweed's) experience in practice that better results were obtained with live vaccine than with dead vaccine. Abscesses sometimes followed with vaccination, but this was due to contaminated vaccine and not to the presence of live abortion bacilli in it.

The preference which was given to the intradermal tuberculin test in cases under the T.B. Order where, for some reason, a tuberculin test was indicated, was on account of the convenience in carrying out the test and was not judged from any other comparison to the other tuberculin tests. According to the present limit of cases that came under the T.B. Order, there should be only a very small percentage of cases which should require the use of a tuberculin test if clinical and microscopical diagnosis were efficiently carried out.

Mr. Levie mentioned the advantage of getting rid of the cellular and other milk constituents so that the tubercle bacilli could be seen more easily. In his opinion it was much better to retain the cellular content of milk for observation as a guide to diagnosis, but there were one or two good methods which might be used for the purpose he mentioned ; one method was to treat the milk with the liq. sodæ chlorinata mixture, and another, which was being tried at present, was to treat the milk with an ether and alcohol mixture, which was supposed to leave the tubercle bacilli more concentrated. As to the length of time required to centrifuge milk, it was sufficient if the milk was allowed ten minutes in a centrifuge running at 3,000 revolutions per minute. In Mr. Tweed's opinion the strippings from a quarter were the best for examination for tubercle bacilli. It was also advisable to spend as long as an hour to an hour and a half searching for bacilli if the clinical appearance of the udder was suspicious of tuberculosis.

In the making of smears for anthrax, mentioned by Mr. Deville, it was preferable, in his opinion, for the macroscopic colour reaction, to make a fairly thick smear of blood. One large drop of blood was sufficient. It was spread on the slide with the end of another slide held at an angle of 45°. The smear was then dried, fixed and stained in the usual way.

It was easy to realise the demand made on a busy practitioner's time by carrying out the microscopic examinations of milk samples, but for efficiency in dealing with cases under the T.B. Order it was essential for the part-time inspector to do so rather than have the delay with a guinea-pig test each time.

He was sorry to have had no experience of the use of the abortoscope mentioned by Mr. Bagshaw, but in making microscopic examinations of the placenta from aborted cows that should be done as soon as possible after abortion, otherwise great contamination with other organisms had taken place. The microscopic examination in that disease, however, was not too reliable, and it was advisable to get the agglutination test carried out with the suspected animal's blood.

The HON. SECRETARY said he would like the privilege of proposing a hearty vote of thanks to Mr. Tweed for coming and giving them one of the most practical demonstrations they had ever had. It was not easy to obtain papers and he (the Hon. Secretary) personally appreciated Mr. Tweed's ready response to his invitation.

This was endorsed by the PRESIDENT, who expressed the hope that Mr. Tweed would come again on some future occasion, and carried unanimously.

Mr. TWEED expressed the pleasure it had been to him to come to their meeting and give them the demonstration, and he was pleased to know that it had aroused interest in the members present.

After the meeting the members had tea together as guests of the President, who was accorded a hearty vote of thanks.

O. V. GUNNING, *Hon. Secretary.*

Lincolnshire and District Division.

PAPER AND DISCUSSION ON VETERINARY BIOLOGICAL PRODUCTS.

Further evidence of the recent revival in the interest displayed by the members of the Lincolnshire and District Division in its affairs was forthcoming on the occasion of the meeting held at Mr. George Lockwood's residence at Peterborough, on Thursday, June 9th, when an excellent attendance was recorded.

The chief feature of a thoroughly interesting meeting was a lecture by Dr. Stanley White, of Messrs. Parke, Davis and Co., on "Veterinary Biological Products," illustrated by a large number of excellent lantern slides. This lecture, as given to the Mid-West and South Wales Division on January 16th, 1925, was reproduced in the *Record* of February 14th of that year, and below we give a resumé of the lecture embodying the fresh material given by Dr. White.

The President, Mr. F. L. Gooch, occupied the chair, and there were also present, in addition to Mr. Lockwood and Dr. Stanley White, Messrs. T. B. Bindloss, W. A. Dickinson, T. Hicks, J. T. Holmes, W. W. Lang, E. Porter-Smith,

H. C. Reeks, sen., H. C. Reeks, jun. (Hon. Secretary), H. P. Standley, sen., C. W. Townsend, J. J. Townsend, H. Walpole and E. Wardrop.

Apologies for absence were received from Messrs. W. W. Grasby, R. G. Nurse, J. H. Poles, T. Runciman, F. H. Sugden and H. H. Truman.

The minutes of the previous meeting of the Division, having been published in the *Record*, were taken as read and were signed as correct.

President's Address.

The President, prefacing his address from the chair, said: "When Mr. Reeks wrote to me after the meeting at Grantham I was very surprised indeed to find that you had elected me as your President. He also said that he had secured the services of Dr. White for to-day; consequently you will not require to hear a long address from me."

In his Presidential Address Mr. Gooch said: Whilst thanking you for the honour you conferred on me by electing me your President, if I had been present at the annual meeting I should have hesitated before allowing my name to stand for nomination.

I am sorry that the old minute book has been lost, but I think this Society was founded in 1881, with Captain Russell as its first President and Stanley Carless as its Secretary. I do not think any one of those present at that meeting is living. At that meeting a resolution was passed, that all veterinary surgeons residing in Lincolnshire should be invited to become members, and I responded, becoming a member and being present at the second meeting. I was made Secretary in 1887, and was President in 1891, thirty-six years back.

The same apathy that prevailed amongst the veterinary surgeons in the county at the inauguration of this Society still exists, and although we have 46 veterinary surgeons residing in the county, only 21 are members.

During my secretaryship I wrote all practitioners residing close to the towns we visited, but even those living in the town and close to the place of meeting did not think it worth while to attend the meeting.

At the commencement of the life of the Society we visited all the towns in Lincolnshire in rotation, extending even to Grimsby in the north, but afterwards the present system of meeting only in three towns was adopted.

I do not intend giving a long inaugural address, but I should just like to touch upon the progress of our veterinary literature during the period of the Society's existence.

When we started in 1881 we had no weekly journal, the first number of the *Record* being produced on August 1st, 1888, and *The Journal of Comparative Pathology*, a quarterly, 1887. The only literature we had before was the *Veterinarian* and the *Veterinary Journal*, both monthly journals. In 1903, the *Veterinary News* was published.

This year makes history, being almost the first time that a Government of this country has recognised the position of the veterinary surgeon sufficiently to give him its financial support, and I trust that we, as a profession, will show that we are willing to help ourselves by giving as much as we can afford so as to raise the sum of £35,000 to meet the promise of the Government towards the rebuilding of the London School.

Much has been said *re* the altering and prolonging of the course of the veterinary student. I am quite of opinion that some of the subjects taken in A and B might be dispensed with, as they are now fully taken in the course of the school education of most of the students, and therefore more time could be devoted to acquiring knowledge of those subjects that are essential. I do not think, however, that the time is opportune for increasing the number of years of the student's stay at College, nor do I think that the remuneration the veterinary surgeon receives when he leaves College justifies the student's parents in sending their sons, if a longer period of study was decided upon.

The article in last week's *Record* on "Judging of Livestock," should not only commend itself to the farmer, but also to the veterinary surgeon, as the veterinary surgeon more than anyone else is the man the farmer thinks ought to know the points and qualities of the best-bred animals.

Any Other Business.

The President: There is one thing which I want to bring forward. On August 11th, the Midland Counties' Division are coming to Stamford, which is in Lincolnshire, and at the last meeting of the Council of that Division I was asked to pass on an invitation from the Midland Counties' Division to the members of this Division to attend that meeting. It is not to be a business meeting; it is entirely a social gathering, and they have left it to me to make the necessary arrangements. We shall be received by the Mayor at the Town Hall at mid-day, and he is going to explain to us the regalia, which is of great interest. We shall then hold a short formal meeting in the Court Room, and will then lunch at the Stamford Hotel, after which there will be a drive to various places of interest, including Burleigh House, a return being made to Stamford for tea. We shall be very pleased to see any of the members of the Lincolnshire and District Division, with their ladies. No meeting of this Division has ever been held at Stamford during the membership of any of those present, and I hope we shall have a splendid attendance. It was suggested that this might be made a Branch meeting of the "National."

Appointment of Delegates.—The President and Secretary were appointed as delegates of the Division to the Royal Sanitary Institute Congress at Hastings, commencing on July 11th, and Mr. Reeks, sen. and the Hon. Secretary to represent the Division at the N.V.M.A. Congress at Torquay in September, it being mentioned that a number of other members would also be attending.

The President now called on Dr. White to give his lecture.

Resumé of Lecture on Serums, Vaccines, and Allied Products.

Dr. White, in his opening remarks, briefly discussed the principles involved in the application of serums and vaccines, although the latter were generally referred to as bacterins, which was probably a better name, as the term vaccine ought really to be restricted to a product containing living organisms. A serum was a substance developed in

the body of an immunized animal by means of which it was possible directly to give antibodies to the patient. A bacterin, on the other hand, was a suspension of micro-organisms in normal saline solution, and was intended to stimulate the patient to produce his own antibodies. It was a question of passive *versus* active immunity.

The lecturer described how until quite recently anti-toxin therapy had been limited almost entirely to the production of antidiphtheria serum and antitetanus serum. This was a comparatively easy matter, because both of these organisms gave up their toxin, which could be utilised in the production of antitoxin. The majority of pathogenic micro-organisms, on the other hand, did not excrete their toxin, and the only way to produce such a serum as anti-white scour serum was to immunize the horse with the killed organism, and finally complete the immunization process by the injection of living organisms. Such an anti bacterial serum, as it was termed, was not, strictly speaking, an antitoxin, although it did contain antibodies.

A great stimulus had been given to the possibilities of antitoxin therapy since the Dicks, of Chicago, some three years ago, showed us that the streptococcus of scarlet fever excreted its toxin, and that this could be collected, and a true streptococcus antitoxin be produced. This work had been extended to include experiments with the streptococcus associated with erysipelas, and puerperal septicæmia, and no doubt similar work in connection with streptococcal diseases in animals would receive attention in the near future.

The manufacture of antitetanus serum was dealt with in some detail, and Dr. White referred to the advantages to be gained by administering antitetanus serum intravenously. In the human subject it was customary to inject the serum intrathecally, but he understood that this was next to impossible in the horse, and the next best thing was to give from 75 to 150 c.c. (8,000 to 16,000 units) according to the size of the horse. In the opinion of one authority it was useless to give antitetanus serum to the animal if he was on the ground. He should be got on to his legs, given a dose of morphia and atrophine if necessary, placed into slings, and then the serum administered by the intravenous route.

Speaking of antiwhite scour serum, Dr. White stated that the product was to be regarded as much more satisfactory for prophylactic purposes than when given as a curative measure. Calves born in herds in which white scour is present should be given as a prophylactic 10 to 20 c.c. of antiwhite scour serum as soon as possible after birth, and the dose repeated if any symptoms of the disease appeared.

Some reference was made to the manufacture of blackegoids, and the recent idea that occasionally the *Vibrion septique* was present as well as the *B. chauvoei*. He was under the impression that the former organism was the one generally associated with blackleg when it attacked sheep. No doubt there was something to be said in favour of using a vaccine made from the two organisms, although the *B. chauvoei* was almost invariably the causative factor when the disease attacked cattle.

Speaking of pyæmic arthritis, reference was made to the value of polyvalent antistreptococucs serum, which should be administered to the mare about ten days before foaling, and a further dose three days before the birth of the foal. It was also very sound treatment to give the foal a quarter of an ounce of serum from 24 to 48 hours after birth. Some people advocated active immunization with streptococcus bacterin in the early days of pregnancy.

The lecturer referred to a number of bacterins used in veterinary practice. In regard to canine distemper bacterin, an interesting piece of research work was being carried out under the auspices of the Field Distemper Committee, and it really did look as though it would ultimately be shown that a filterable virus was the causative factor. On the other hand, the evidence in favour of the *B. bronchisepticus* being an important secondary invader seemed to have been established beyond all question of doubt, and it was well known that the secondary infection might be even more serious than the primary infection. Until it was definitely established that it was possible to immunize against canine distemper he should still continue to advocate the use of canine distemper mixed bacterin, especially the one containing in addition to the *B. bronchisepticus*, streptococci and staphylococci of canine origin.

Having discussed such of the various veterinary diagnostic agents as mallein and tuberculin, the lecturer concluded with a reference to the vitamins, and some of the important gland products used in veterinary practice, and it was shown how it was possible to estimate the fat-soluble vitamins A and D (anti-ophthalmic and anti-rachitic factors), and the extraordinary effect which foods rich in these substances had upon animals obviously deficient in these accessory food factors.

The gland products referred to included adrenalin, pituitrin and parathyroid.

The PRESIDENT: You have heard Dr. White's lecture, and if anyone would like to ask him any questions, I have not the least doubt that Dr. White would be very glad to answer them.

DISCUSSION.

Mr. HICKS: I was very interested in the whole of the lecture and I, with the rest of those present, am very grateful to him for coming here to present it to us. (Applause.) I would like to ask a question with regard to the use of adrenalin as a hæmostatic agent in, for example, such cases as nasal hæmorrhage in racehorses. I had a very interesting case during the point-to-point season, of a horse which was frequently pulled up by nasal hæmorrhage after completing three-quarters of the course and often when leading the field. The owner came to me for advice, and a friend of mine, a doctor, suggested that I might try calcium lactate with very beneficial results. I did so, administering ℥ii. twice a day for three or four days. The horse has since won two races and there has been no recurrence of the hæmorrhage. I should like to ask Dr. White what dosage of adrenalin he would have given.

Mr. PORTER-SMITH, having thanked the essayist, said that he wished to enquire of him as to the use of the *Bacillus coli* serum in conjunction with the anti-white scour serum in the prophylaxis and treatment of white scour in calves.

Mr. WARDROP: I noticed that Dr. White mentioned about the disease caused by the Japanese eating polished rice, and I should like to know what would

be the effect of giving polished and unpolished corn respectively to birds.

Mr. PORTER-SMITH: Concerning the vitamin the lack of which produces this polyneuritis (beri-beri), would that be likely to be present in linseed oil? I ask because of my experience in its use in the endeavour to get horses into condition. Sometimes, when I have tried in all other possible ways to do this, but without success, I have tried this method and it has yielded excellent results. I tried it a good many years ago on an Arab pony. A number of veterinary surgeons had endeavoured to get him into condition, but had failed, and I tried my linseed oil method and got the pony quite fat.

Mr. LANG: I would like to ask Dr. White the effect of large doses of salt solution on the calcium content of the blood. In the treatment of large wounds I have employed them and I have always found a great outpouring of serum; does that indicate a reduction in the calcium? In regard to getting animals into condition, I think I would back my salt method against the linseed oil any day. (Laughter.)

Mr. PORTER-SMITH: I would back a hypodermic injection of æther against salt solution at any time.

Mr. WALPOLE: I wish to ask Dr. White about the sloughing that you sometimes get after the use of adrenalin. I have used adrenalin in some cases with complete success, but in others I have had disaster with it, especially in cases of eversion of the uterus, injecting it right into the body of that organ, when sloughing has occurred afterwards. I should like to know whether the occurrence of sloughing is very unusual, or whether it is an accident about which one must be constantly on one's guard.

The PRESIDENT: I should like to thank Dr. White very much indeed for coming here to give us this interesting lecture. I fortunately heard him a month ago on a similar subject, with which he yet dealt quite differently, and I am sure we have had a most interesting and instructive address to-day. Many of us are very jealous of the information that Dr. White can impart not only to us concerning the subjects about which he has been speaking to-day, but also to the sister profession on the ductless glands of the body. I am beginning to think that we old fellows are altogether out of date and that we shall have to start all over again. That subject of the ductless glands is coming to the fore, particularly in regard to the treatment of the smaller animals.

Mr. PORTER-SMITH: I should like to second the vote of thanks proposed from the Chair, and I do so very warmly, for the subject carries us very close to human pathology and emphasises the necessity for the establishment of closer relations between the medical and the veterinary professions.

THE REPLY.

Dr. STANLEY WHITE: Mr. Hicks asked about the use of adrenalin as a hæmostatic agent in racehorses. Some time ago I spent a great deal of time in trying to investigate the subject of hæmorrhage in the racehorse. A very well-known horse had a very similar sort of trouble to that mentioned—he, too, when winning "hands down"—(I trust that is the correct sporting term)—would have to be pulled up when the greater part of the course had been covered. At that time I thought that possibly it might be due to some defect in the blood-clotting mechanism—that, probably, was what the doctor had in mind when he suggested using calcium lactate. But I could not satisfy myself that there was any actual tendency to hæmorrhage such as one sees in hæmophilia in the human subject, which is due to a defect in the blood platelets, and which only occurs in the male subject. (Mr. HICKS: This horse was a gelding.) That is, of course, an interesting feature. I put the question to Major Hobday and Professor Wooldridge, and both agreed that in their experience hæmorrhage in the racehorse was not due to any defect in the blood clotting mechanism, and in that case there would exist no indication for the administration of calcium lactate. There is, however, a serum available; a serum known as hæmoplastin, which is extraordinarily useful in controlling hæmorrhage. In these racehorses they gave big doses of hæmoplastin, and that seemed to bear out what Major Hobday and Professor Wooldridge had told me. The general impression seems to be that it is a question of high blood pressure—a sort of hyperpiesis—brought about by excessive exertion. I went so far as to try and give these horses something that would definitely reduce the blood pressure, which one can do by the administration of such drugs as sodium nitrate, nitroglycerin and lithium hippurate, but I lost touch with the case and I am afraid that the investigation did not go very much further. I shall take an opportunity of trying calcium lactate when the next opportunity arises. I have formed the opinion that excessive hæmorrhage in the female is due to a deficiency of calcium and that in the male it is due to some defect in the blood-clotting mechanism.

Mr. Porter-Smith asked about the *Bacillus coli* in conjunction with the use of antiwhite scour serum. I merely indicated that it is possible to make an antiwhite scour serum. There is evidence to show that the serum is of value as a prophylactic agent. Once the condition has developed, however, it is not such an easy matter to cure the condition with serum. He also raised the question of the vitamin content of linseed oil. Linseed oil contains no vitamin, but if we were to take the linseed oil and treat it with ultra-violet rays it would then contain vitamin "D," and in that condition it might be sufficient to supply all the vitamin necessary. Professor McIlroy, of the Royal Free Hospital, London, tells me that instead of washing the newly-born babies there they are now rubbing them all over with olive oil and they are confident, from the results obtained, that the olive oil so applied is acting as a food, although olive oil without irradiation contains no vitamin.

Replying to Mr. Lang, I cannot say if treatment with salt solution would reduce the calcium content of the blood: how do you administer it?

Mr. LANG: By means of the stomach tube.

Mr. Walpole raised the question of sloughing following the use of adrenalin. It depends entirely, I think, on whether the adrenalin is being introduced into an area where the blood supply is restricted. The advantage of giving adrenalin with the cocaine is that the former retards the diffusion of the latter. But suppose you inject it into the gum with the object of removing a tooth the blood flow is comparatively limited in that area,

and if the adrenalin is in a greater concentration than 1 in 20,000 you will produce sloughing, as you cut off the blood supply. Personally, I do not think that more than 1 in 100,000 is necessary when using it with novocaine. I should much prefer pituitrin in the treatment of uterine hemorrhage because the effect on the uterus is slower and more lasting.

Mr. Gooch made reference to the importance of the subject which I have been discussing to-day, and that reminds me that for the first time, I believe, in the history of the British Medical Association, there is to be a Section of Comparative Pathology on the occasion of their annual meeting at Edinburgh this year, of which section Dr. Bradley is to be the President. (Applause.) As you know, there is also a Section of Comparative Pathology in connection with the Royal Society of Medicine. These things are all to the good. (Hear, hear.) They suggest closer co-operation between the veterinary and the medical professions, and I do think that there is a lot that could be done if that co-operation was more general and more easily attained than it seems to be at the present time.

I much regret that I omitted to reply to Mr. Wardrop's question concerning the polished corn for poultry. That was because it was put between two questions from Mr. Porter Smith. Polished corn undoubtedly is deficient in vitamin "B," so that when you see yeast tablets advertised as the sort of thing that is going to pick you up it is only the vitamin "B" you are going to get. The absence of this particular vitamin will produce polyneuritis (beri-beri) in the human or bird; it is also very definitely growth producing. It is conceivable that we shall ultimately divide the vitamin "B" into anti-beri-beri and growth-producing factors. If you polish the corn you remove the aleurone grain layer containing the vitamin "B"; certainly, if you feed a bird on polished corn you produce symptoms of polyneuritis.

Mr. WARDROP: I asked the question because I am interested in racing pigeons, which are fed on polished corn.

Dr. WHITE: I may say that it is common in certain parts of the country to give racing pigeons a dose of concentrated vitamin extract—such as is present in metagen—before they take a long flight.

The PRESIDENT: It has been proposed and seconded that the best thanks of the meeting be given to Dr. White for coming here to give us his splendid lecture.

The vote of thanks was carried with acclamation, and Dr. WHITE, in acknowledging the compliment, said that as a matter of fact it had been a particular pleasure to him to address the Lincolnshire Division, as he happened to be a Lincolnshire man, with many veterinary friends in the county.

At the conclusion of the meeting the members were entertained by Mr. and Mrs. Lockwood to a "salmon tea," for which kindness a very hearty vote of thanks was accorded.

H. C. REEKS, jun., Hon. Secretary.

Why is a rabbit's nose always moist?
Because its powder puff is at the other end.

NOTES AND NEWS.

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events.

Sept. 12-17th—N.V.M.A. Congress at Torquay.

July 18th—Meeting of the Editorial Committee, N.V.M.A., at 4-30 p.m.

July 26th—Meeting of the Central Division at New Haw, Surrey.

July 28th.—Summer Meeting of the Eastern Counties' Division at Cambridge.

July 29th—Meeting of the North Wales Division at Llanrwst.

A CONGRESS "AT HOME."

A Congress innovation of a thoughtful character was announced by the President at the Quarterly Meeting of Council N.V.M.A. (of which a report appears in this issue) in the holding by Mrs. Wooldridge of an "At Home" at the Torbay Hotel at 8-30 on the evening of the opening day, Monday, September 12th.

We are sure that members who anticipate the company of their ladies at the Congress will appreciate this means of ensuring that the latter will lose no time in making those early introductions which are so essential if the rapidly-passing week is to yield its maximum of social enjoyment.

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Further particulars than those already published in regard to facilities for tennis playing are now to hand. A hard court has been secured at Abbey Park, Torquay, for the use of visitors to the Congress for the whole of one or two afternoons and they can also play at any time by putting their names down in the usual way. A tournament will be arranged provided sufficient entries are secured, and intending competitors are requested to forward their names without delay to the Local Secretary, Mr. R. B. Nelder, 24 Dix's Field, Exeter.

R.V.C. REBUILDING FUND.

The Jockey Club has sent a donation of £500 to the Fund for rebuilding and equipping the Royal Veterinary College, Camden Town, London, and the National Hunt Committee a donation of £50.

BEIT MEMORIAL FELLOWSHIP.

We congratulate Mr. W. R. Wooldridge, B.Sc., M.R.C.V.S., of Cambridge, on his recent election to a Junior Fellowship (value £400 per annum) by the Trustees

of the Beit Memorial Fellowship for Medical Research.

The personal particulars accompanying the announcement of the election were as follows:—

WALTER REGINALD WOOLDRIDGE.

B.Sc.(Lond.), 1922; Second Class Honours Chemistry, Zoology Subsidiary; M.R.C.V.S., 1924 (Centenary Medallist); Ministry of Agriculture Veterinary Research Scholarship (1924-5); Frank Smart Studentship in Biochemistry, Gonville and Caius College, Cambridge (1926); M.Sc. (Lond.), 1927.

Original Contributions to Science, Medicine, and Research.—Dehydrogenations produced by Resting Bacteria III. By J. H. Quastel and W. R. Wooldridge. *Biochem. Journ.*, 1925, 19, 652. The Effects of Chemical and Physical Changes in Environment on Resting Bacteria. By J. H. Quastel and W. R. Wooldridge. *Biochem. Journ.* 1927, 21, 148. The Conditioning (Ripening) of Meat, By W. R. Wooldridge. (Report to Sir W. B. Hardy, Director, Food Investigation Board.)

Present Occupation and how engaged since Graduation.—At present engaged in Biochemical Research at the Sir William Dunn Institute, Camb., as Frank Smart Student, together with a part time grant from the Medical Research Council for bacterial chemistry. 1924, July-December.—Veterinary practice at Reading. December, 1924-June, 1925.—Veterinary Research Scholar of Ministry of Agriculture at the Institute of Animal Pathology, Camb., under Professor J. B. Buxton. June, 1925-June, 1926.—Research Assistant, Food Investigation Board. Low Temperature Research Station, Cambridge, under Sir W. B. Hardy.

General Character of Proposed Research.—Bacterial chemistry and its application to immunological problems.

Place of Research.—Sir William Dunn Institute of Biochemistry, Cambridge.

APPOINTMENT.

Mr. Reginald Lovell, M.R.C.V.S., D.V.S.M., Demonstrator in Bacteriology at the University of Manchester, has been appointed Research Assistant in Comparative Pathology at the London School of Hygiene and Tropical Medicine.

LIVERPOOL UNIVERSITY SCHOOL OF VETERINARY SCIENCE.

EXAMINATION LISTS, JULY, 1927.

DEGREE OF M.V.Sc.: Morcos, Z.

DEGREE OF B.V.Sc.: FINAL EXAMINATION: *Part I.*—Macdonald, J., *Parasitology.*

Part II.—Durrant, G., *Bacteriology, Hygiene of Milk*; Fraser, A. C.,; Roberts, Ida L., *Bacteriology*; Shuttleworth, A. C.

THIRD EXAMINATION: *Parts II and III.*—Curtis, H.

FIRST EXAMINATION: *Part I.*—Greener, Averil W.; Jenkins, E. D.

Part II.—Greener, Averil W.; Sidhom, N. B.

R.C.V.S. OBITUARY.

DYER, Samuel, Shipston-on-Stour, Warwickshire. Graduated, London, 4th April, 1873. Died, 30th June, 1927.

"The late Mr. Dyer was 79 years of age, and until quite recently was about as usual, but retired some two years ago from active participation in his practice in favour of Mr. W. A. Ireland, M.R.C.V.S.," says the *Evesham Journal*, of July 9th.

"The deceased gentleman was the son of the late Mr. James Walker Dyer and was born at Little Wolford. After leaving school he learned farming under his father and during his spare time studied veterinary science. He remained at Little Wolford until he obtained his diploma of M.R.C.V.S. (London) in April 1873, and then moved to Brailes where he commenced his first practice. Two years later Mr. Dyer came to reside in apartments at the George Hotel, Shipston-on-Stour, and he remained in the town until his death. He married Miss M. Keyte, of Brailes, who predeceased him, and there was one son and one daughter of the marriage, both of whom were lost to him in early life. Mr. Dyer was a great authority on and lover of horses and in his younger days exhibited many at local shows and took numerous prizes. He left instructions for his favourite mare, which he himself bred over 30 years ago, to be destroyed at his death, and his last wish has been respected. The deceased gentleman was Veterinary Inspector at the Shipston Sale Yard under the Warwickshire Constabulary and held the appointment for many years. He was exceedingly well-known in Shipston and a wide surrounding district and the news of his death was received with great sorrow."

ARMY VETERINARY SERVICE.

LONDON GAZETTE—WAR OFFICE—TERRITORIAL ARMY.

July 4.—A. C. Shuttleworth to be Lt. (May 1).

July 5.—Lt.-Col. E. Franklin, O.B.E., T.D., having attained the age limit, is ret. and retains his rank with permission to wear the prescribed uniform (June 17); William Stephen Codrington to be Lt. (July 6).

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ARMY PROMOTION.

Captains J. Southall, P. Howard and C. S. Northcott, of the Royal Army Veterinary Corps, have passed the Home Stations March Examination in Written subjects held with a view to promotion.

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AN INDIAN VETERINARY RESERVE.

"In spite of the revolutionary progress of mechanisation, the war horse is likely to survive long in India," says *Truth*. "That the Indian Army authorities share in this view is certainly suggested by the new scheme for forming a Veterinary Reserve. The force is to consist of privates only, 200 of whom are to be taken at once. Men of not less than six years' Army service are eligible, and will be required to serve for fifteen years, putting in one month's training each year. The officer in charge of the Veterinary Corps Depot at Ambala will be the commandant of the Reserve *ex officio*. Reserve pay, as distinct from training pay, is merely nominal, being fixed at four rupees a month, but I presume that those who should know are satisfied they will get the necessary numbers on these terms."

THE SURPLUS MILK PROBLEM.

An attempt to deal effectively with the surplus milk problem is to be made in Scotland. The scheme is of a bold and enterprising description, and the development of the project will be watched with interest in England. It is wide enough in scope to cover the dairying counties in the south-western counties, and the primary conditions are to equalise prices and proportions supplied. The idea inspiring the enterprise is to ensure the stability and welfare of the dairying industry. There is no intention to hold either the distributor or the consumer to ransom, but simply to prevent that diminution in the output of milk that would be unfortunate for all concerned. The agency seeks (1) to supply good milk in the required quantities; (2) to spread the burden of surplus milk over all producers; (3) to increase consumption of good milk; (4) to discover new and more profitable methods of utilising milk that is surplus to liquid requirements and milk residues. The movement has the support of the Scottish N.F.U., and represents a courageous and serious effort to remove obstacles that threaten to undermine the dairying industry. —*The Times.*

CORRESPONDENCE.

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The Editor does not hold himself responsible for the opinions of his correspondents.

Mycosis in the Hen.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—Mons. C. Truche's further communication is interesting.

In the original translation (*Veterinary Record*, June 11, pp. 521 and 522) he remarks :—" We generally find the liver covered with a fine greyish membrane more or less adherent to the parenchyma " ; also, " the heart is completely enveloped in a whitish pericardial sac "—" The lungs are covered with the same membrane." It would be interesting to know of what this membrane consists, and what its appearance is under the microscope. This point would seem to be as important as the composition of the nacreous spots.

Psittacosis, or mycosis, of pigeons, intestinal mycosis of pheasants, aspergillosis (or mycotic inflammation of the lungs), mycotic gastro-enteritis of the horse and dog and mycotic stomatitis all produce their chief effects on the internal surfaces of the organs attacked and only one, *viz.*, aspergillosis, at times shows numerous hard, yellow, purulent or caseous, pseudo-tuberculous spots on the external surface of the lungs. Reasoning from analogy, it may be asked why mycosis of the hen should differ from these other mycoses, by exhibiting whitish or greyish membranes on the surfaces of the organs previously mentioned. If the *Nocardia dassonvilli* is a common fungus on straw, hay and oats and produces outbreaks leading to the death of one-third or one-fourth of the flock, one would expect to observe far more fatalities from it, in poultry yards, than hitherto appears to have been the case. In two recent outbreaks the mortality was one and three. In my experience of *post-mortem* examinations, white or greyish membranes on the surfaces of the thoracic or abdominal organs in the fowl are rather rare, and deaths showing them not very frequent.—Yours truly, G. MAYALL.

The Eradication of Tuberculosis.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—I have read Colonel Rainey's letter in your issue of July 2nd, and will endeavour to suffer his rebuke with all the fortitude that I can muster.

My letter was one rather of " facts " than " attack," and I am sure that Mr. Henry Gray so regarded it.

I have attacked no person's " right to express any views" but I do suggest that all the " published information " is better assimilated by the " clinical experience " of the bovine practitioner.—Yours faithfully, J. F. D. TUTT, M.R.C.V.S.

1 St. Cross Road,
Winchester.
July 6th, 1927.

The Editor acknowledges the receipt of the following :—

Communications from Mr. H. Gray, Miss Doris Knight (Reading), Messrs. J. K. Shaw, C. Weighton, and Lieut-Col. T. P. Young.

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